

Serial Number: 09/832,668

Page 2
Dkt: SP01-076**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1-28. (cancelled)

29. (currently amended) An apparatus for fabricating a fiber-optic element, comprising:

a first chamber and a second chamber, the second chamber being capable of maintaining an inert atmosphere;

~~a first and a second fiber holder for suspending a fiber for making the fiber-optic element inside coupled to opposite sides of the first chamber, the first and second fiber holders having grooves through which fibers can be inserted into the first chamber, said first and second fiber holders being capable of suspending and aligning two fibers in opposing relation inside the first chamber;~~

~~a filament supported support structure movably disposed inside the second chamber, the filament support structure supporting a filament loop which provides controllable and uniform heat;~~

~~a barrier adjoining valve which forms a seal between the first chamber and the second chamber, wherein the barrier is selectively and is operable to provide a passage controlled access between the first chamber and the second chamber; and~~

~~a positioning device for moving the filament between the second and the first chamber when a passage is provided between the first chamber and the second chamber coupled to the filament support structure, the positioning device being capable of extending the filament support structure into the first chamber, controllably aligning the filament loop with fibers in the first chamber, and subsequently retracting the filament support structure into the second chamber.~~

30. (canceled)

Serial Number: 09/832,668

Page 3
Dkt: SP01-076

31. (original) The apparatus of claim 29, wherein the positioning device is a translation stage, a y-z stage, an x-y-z stage, or an actuator.
32. (currently amended) The apparatus of claim 29, wherein the first chamber is capable of maintaining an inert atmosphere at least around the filament loop when the filament loop is in the first chamber.
33. (original) The apparatus of claim 29, wherein one or more ports are provided in the first chamber for viewing an interior of the first chamber.
34. (canceled)
35. (currently amended) The apparatus of claim ~~[[34]]~~29, further comprising an optical sensor coupled to the filament support structure for detecting a gap between the two opposing fibers in the first chamber.
- 36-39. (canceled)
40. (new) The apparatus of claim 29, which includes a plurality of the second chambers mounted on a carousel such that the second chambers can be selectively and individually aligned with the first chamber.
41. (new) The apparatus of claim 40, wherein the valve forms a seal between the first chamber and a selected one of the second chambers aligned with the first chamber.
42. (new) The apparatus of claim 29, further comprising a viewing device for capturing an image of fibers in the first chamber.